# 6GV5

## Beam Power Tube

**DUODECAR TYPE**

**Electrical:**

Heater Characteristics and Ratings:

| | | |
|---|---|---|
| Voltage (AC or DC) | 6.3 ± 0.6 | volts |
| Current at heater volts = 6.3 | 1.200 | amp |
| Peak heater-cathode voltage: | | |
| Heater negative with respect to cathode | 200 max. | volts |
| Heater positive with respect to cathode | 200[a] max. | volts |
| Direct Interelectrode Capacitances (Approx):[b] | | |
| G1 to P | 0.6 | pf |
| Input: G1 to (K+G3,G2,H) | 16 | pf |
| Output: P to (K+G3,G2,H) | 7.0 | pf |

**Mechanical:**

Operating Position . . . . . . . . . . . . . . . . . . . . . . .Any
Type of Cathode. . . . . . . . . . . . . . . .Coated Unipotential
Maximum Overall Length . . . . . . . . . . . . . . . . . . 3.625"
Seated Length. . . . . . . . . . . . . . . . . . 2.000" to 2.250"
Diameter . . . . . . . . . . . . . . . . . . . . 1.437" to 1.563"
Dimensional Outline. . . . . . . . . . . . .See *General Section*
Bulb . . . . . . . . . . . . . . . . . . . . . . . . . . . . .T12
Cap. . . . . . . . . . . . . .Skirted Miniature (JEDEC No.C1-3)
Base . . . . . Large-Button Duodecar 12-Pin (JEDEC No.E12-74)
Basing Designation for BOTTOM VIEW . . . . . . . . . . . 12DR

Pin 1 - Heater
Pin 2 - No Internal Connection
Pin 3 - Grid No.2
Pin 4 - Cathode, Grid No.3
Pin 5 - Grid No.1
Pin 6 - Same as Pin 2
Pin 7 - Grid No.2
Pin 8 - Same as Pin 2
Pin 9 - Grid No.1
Pin 10 - Same as Pin 4
Pin 11 - Grid No.2
Pin 12 - Heater
Cap - Plate



**Characteristics, Class A₁ Amplifier:**

| | | | | *Triode Connection*[c] | |
|---|---|---|---|---|---|
| Plate Voltage | 5000 | 60 | 250 | 150 | volts |
| Grid-No.2 Voltage | 150 | 150 | 150 | 150 | volts |
| Grid-No.1 Voltage | – | 0 | -22.5 | -22.5 | volts |
| Amplification Factor | – | – | – | 4.4 | |
| Plate Resistance (Approx.) | – | – | 18000 | – | ohms |
| Transconductance | – | – | 7300 | – | μmhos |
| Plate Current | – | 345[d] | 65 | – | ma |
| Grid-No.2 Current | – | 27[d] | 1.8 | – | ma |
| Grid-No.1 Voltage (Approx.) for plate ma. = 1 | -100 | – | -42 | – | volts |

## HORIZONTAL-DEFLECTION AMPLIFIER

**Maximum Ratings,** *Design-Maximum Values:*

*For operation in a 525-line, 30-frame system*[e]

| | | | |
|---|---|---|---|
| DC Plate-Supply Voltage | 770 | max. | volts |
| Peak Positive-Pulse Plate Voltage[f] | 6500 | max. | volts |
| Peak Negative-Pulse Plate Voltage | 1500 | max. | volts |
| DC Grid-No.2 (Screen-Grid) Voltage | 220 | max. | volts |
| DC Grid-No.1 (Control-Grid) Voltage | -55 | max. | volts |
| Peak Negative-Pulse Grid-No.1 Voltage | 330 | max. | volts |
| Cathode Current: | | | |
| Peak | 550 | max. | ma |
| Average | 175 | max. | ma |
| Grid-No.2 Input | 3.5 | max. | watts |
| Plate Dissipation[g] | 17.5 | max. | watts |
| Bulb Temperature (At hottest point on bulb surface | 220 | max. | °C |

**Maximum Circuit Values:**

Grid-No.1-Circuit Resistance:
For grid-resistor-bias operation . . . . . 1 max. megohm

[a] The dc component must not exceed 100 volts.
[b] Without external shield.
[c] With grid No.2 connected to plate.
[d] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.
[e] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.
[f] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.
[g] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.